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(72)Inventor: IMOTO HIROSHI

YAMADA SHINICHIRO

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(54) NEGATIVE ELECTRODE MATERIAL, AND NONAQUEOUS ELECTROLYTE SECONDARY BATTERY USING THE SAME

(57) Abstract:

PROBLEM TO BE SOLVED: To improve the Li dope/de-doping capacity, and to increase the capacity of a secondary battery by providing a compound containing at least one of Si, Ge and Sn, and N and O.

SQLUTION: A compound to be used for a negative electrode material is expressed by a general formula of MxNyOz. M is at least one element from among Si, Ge and Sn, and inequalities 1.4<x<2.1, 1.4<y<2, 0.9<z<1.6 are satisfied. An embodiment of the compound includes Si2N2O, Ge2N2O, and Sn2N2O. Alkaline metal or alkaline-earth metal such as Li, Na, K, Mg, Ca and Al may be added to this compound. For example, a part of Si can be replaced as in Al like Si2-xAlxN2-xO1+x. A part of tetravalent element is replaced by other monovalent to trivalent elements to improve conductivity.

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